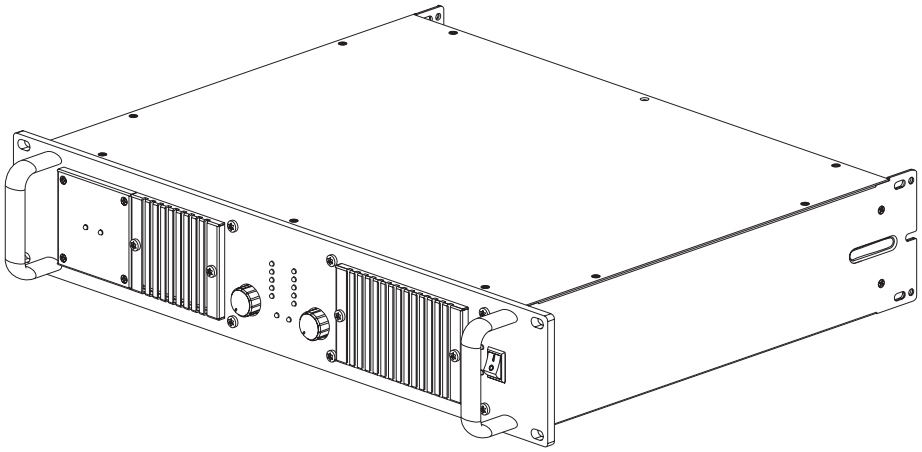
FAMOUSOUND
The professional

Masx series professional power amplifier

User's Manual



MA1200sx/MA2400sx
MA3600sx/MA4800sx/MA7200sx

P/N: 020010140060700

EN

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1.Read these prescripts.

2.Keep this user manual.

3.Pay attention to all the notice.

4.Comply with these prescripts.

5.Warning:To avoid causing fire or hit by the thunder,don't put the equipment in the rain or in the wet environment.

6.Wiped by dry cloth.

7.Do not block the openings. Install according to the manufacturer's instructions.

8.Please don't close to the heat when installation,such as radiator,furnace and other heating device.

9.Don't make a grounding plug security failure, the equipment should be grounded through a protective connected to a socket.

10.Prevent the wire to being trampled or extrusion, with particular attention to the plug, socket and connecting device.

11.Turn off the power amplifier before unplug the power line, the signal line or a touch input mode selection switch, limiter disconnection.

12.Must be used with a nominal supply voltage,the service will be paid if the damage caused by the wrong power voltage.

13.Signal distributor is advised to be used when the input signal paralleled with more than 3 amplifiers, to ensure the input signal without distortion.

14.Don't connect the output interface of one channel to the input interface of another channel in the power amplifier. Don't connect one power amplifier to another one by connecting their output in series or parallel connection.

15.Match with the power amplifier, the power of the power amplifier should be 50%-100% more than the loudspeaker power.

16.When maintenance, don't connect the probe of the oscilloscope to the output interface under bridge in case of damaging the power amplifier and the oscilloscope.

17.Please use the sequence power for multi amplifier used in the same time.

Important information in this manual

Be careful of electric shock，unqualified personnel are forbidden to open for repair.

Foreword

Welcome

Thank you for purchase our exciting products.
MAsx series is professional power amplifier with PEQ curve card ,the PEQ curve can be customized, if not insert the PEQ card, it can be used as an ordinary power amplifier match with the general speakers. In order to play a better performance, please read this manual carefully.

Unpacking

Please make sure if the appearance of the power amplifier was damaged or not during the transportation after you opened the package. Please make sure the preset voltage is matched with your local AC voltage (please check it on the rear panel of the power amplifier). We suggest you retain the package in case you need them for further transportation.

Support and service

Please contact the local distribution of SAE Audio co.,ltd to obtain fast after sale service and technical support. Please contact the manufacturer directly for technical problems in the following contacts:
email：support@saechina.com
Fax：+86-757-8568-8191

Important safety issues

Our products has already taken the safe requirement in to consideration and all the finished products have been tested under the requirement of the government before sale. Users should read the notice in this manual before operation as there is dangerous high voltage and electricity inter the products. It will increase the chance of getting shock by the electricity if the product falls down, recess in the appearance, soaked or there were some parts loose internal. If there are problems above, please turn off power immediately and send the defective units to local distributor for service.

Rated Power

Model	8 Ω*	4 Ω*	2 Ω**
MA1200sx	310W	500W	600W
MA2400sx	450W	750W	1100W
MA3600sx	650W	1050W	1350W
MA4800sx	850W	1400W	2300W
MA7200sx	1200W	2000W	3000W

1 .1 .Masx series is SMPS amplifier with PEQ function, to compare with the traditional power existing products, it not only has the function of the existing power amplifier, but also a selectable PEQ setting card functions, with wider applicability.

2 .Function part

2.1 With a soft clipping function, when the input signal amplitude exceeds the setting range, it will trim the input waveform amplitude smoothly; It will be bigger, more powerful voice compared with the peak pressure limiting output power.

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2.2 Input sensitivity/Stereo/Parallel/Bridge/Soft clipping

2.3 Protect function for soft start, short circuit, overload, over heat, distortion voltage limit, over current, volume gradually function when turn on, VHF

2.4 PEQ curve can be customized according to customer requirements, for different speakers and different frequency response, PEQ card can be easily replaced only to unscrew four screws on the panel , satisfy different needs of sound effect in different environment .

CLIP lights up
It shows that the distortion happens, about 0.5% distortion.
PROT lights up
It shows that the protection function works; it lights up when short circuit, direct current, over heat, VHF(long time whistle)

Rated power rates are displayed in the "Specification"page.
CH1, CH2, PEQ PCB indicator
When insert the PEQ PCB, the green light will light up or off with the power on or off.

Ch2 volume knob
When in bridge mode, this knob doesn't work, the volume is controlled by CH1.
When in stereo or parallel mode, this knob can only control the volume of Ch2.
Gain control range -80~0dB.

PEQ control box

Signal Indicator, green.

Bridge mode Indicator, orange
Parallel mode Indicator, orange

5dB Signal Indicator, orange
10dB Signal Indicator, green

Ch1 volume knob
When in bridge mode, this knob doesn't work, the volume is controlled by CH2.
When in stereo or parallel mode, this knob can only control the volume of CH1.
Gain control range -80~0dB.

Vent hole
Inner installed fan sucks air and flow to rear panel;
If the power amplifier works over-load,
the fan will rotate speedily, do not block the vent hole.

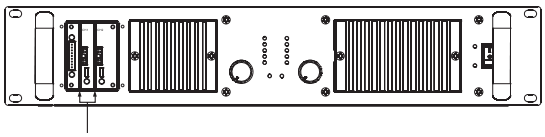
Mounting hole
Standard 19" Frame, 2U

"ON",Power Indicator
When it is green, the main power system works, or not work.

Handle

Power Button
"I",power on
"O",power off

Standby Power Indicator
Light up when power connected,
When the power button on, the "On"lights up,
and this indicator light turns down.

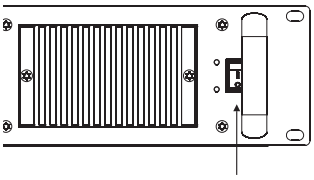


CH1/CH2 BYPASS & PEQ PCB Scoket

Remarks: BYPASS PCB, full frequency; PEQ PCB, Custom frequency response.

1. Turn off the power before changing the new PEQ PCB.
2. Do not touch the electronic devices when changing the new PEQ PCB.
3. Make sure the double-pin on the PCB can insert exactly the double-socket on the control board and connect well. Then, turn on the power.
4. Must turn down the volume or turn off the power amp before changing different frequencies.

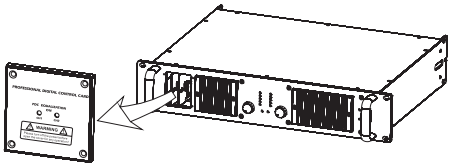
Turn off the power



Turn off the power, press the button to "O".

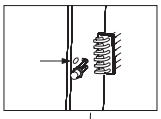
1

Remove the lid of the control box.

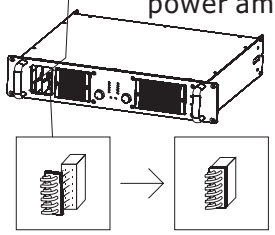


2

Change PEQ PCB



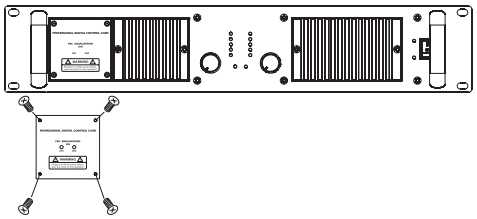
When disassemble the PEQ PCB, please use professional tool to pull the PCB out. Do not pull out the PEQ PCB by hand, to avoid causing noise on the power amplifiers.



Make sure the double-pin on the PCB can insert exactly the double-socket on the control board and connect well.

3

After changing the PEQ PCB, install the lid, operation finished.

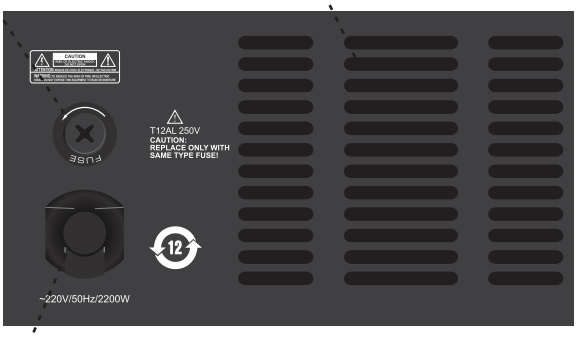


4

Remark:
The BYPASS PCB is express pass, without PEQ function, the PEQ PCB will be provided according to customers' requirements.

Vent hole
Please do not block the vent
when the power amplifier works.

Fuse(220V/240V/110V)
Standard fuse inside,
protect the power amplifier from over-current or faults.
If the power amplifier is connected with power,
but the indicator doesn't light up, please check the fuse,
if it is broken, please change a new same standard fuse
before trouble shooting.



AC Input
working voltage/frequency/power dissipation

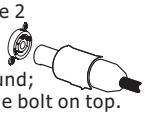
Sensitivity switch (ON ■ OFF)			
CH1			
CH2			
Input level	32dB	1V	0.775V

Speaker Connection Case 1

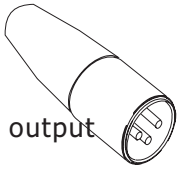
Binding Post

Put the bare wire or terminals into them.

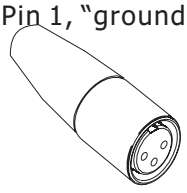
Speaker Connection Case 2
SPEAKON
After inserting, turn it
until you hear "click" sound;
When pull it out, push the bolt on top.



CH1/CH2 signal parallel input
Balance XLR input
Pin 2, "+", Pin 3, "-", Pin 1, "ground"



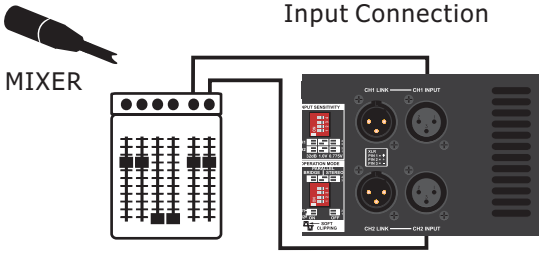
CH1/CH2 signal parallel output
Balance XLR output
Pin 2, "+"; Pin 3, "-",Pin 1, "ground"



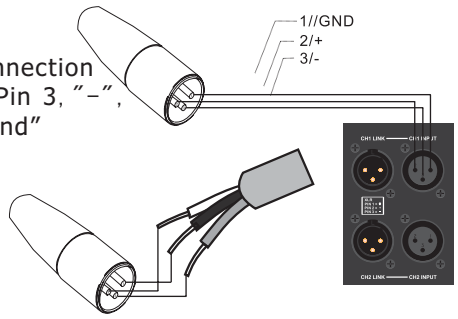
Operation Mode
Stereo/Parallel/Bridge
Flexible reduction peak

Input Connection

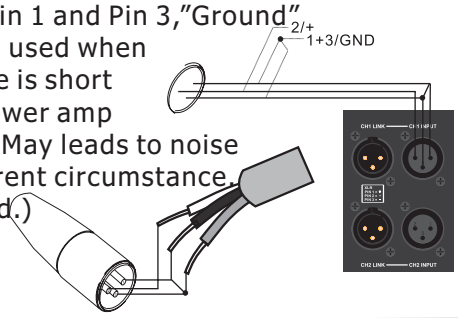
MIXER



Balance connection
Pin 2,"+", Pin 3, "−",
Pin 1,"Ground"

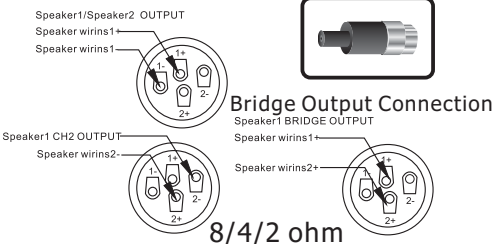


Unbalance Connection
Pin 2, "+" Pin 1 and Pin 3,"Ground"
Only can be used when
the distance is short
between power amp
and signal; May leads to noise
under different circumstance.
(not advised.)

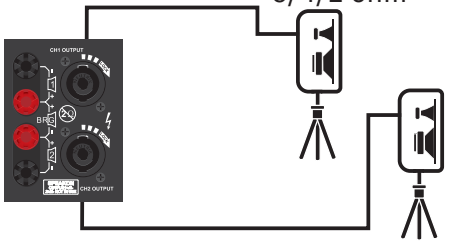


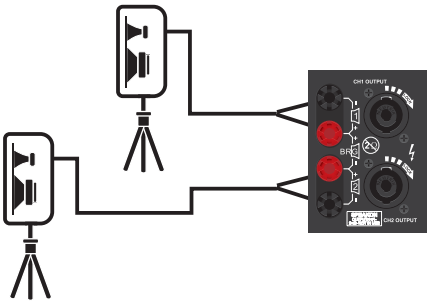
Stereo/Parralel Output Connection

Speaker Connect



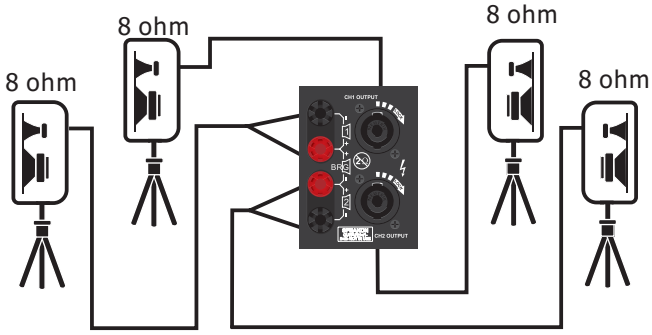
8/4/2 ohm

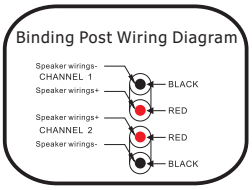




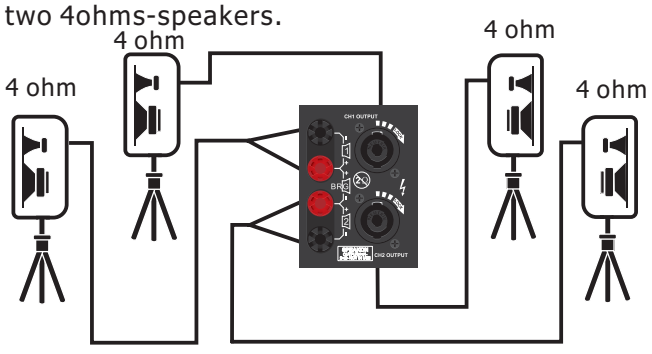
Wiring

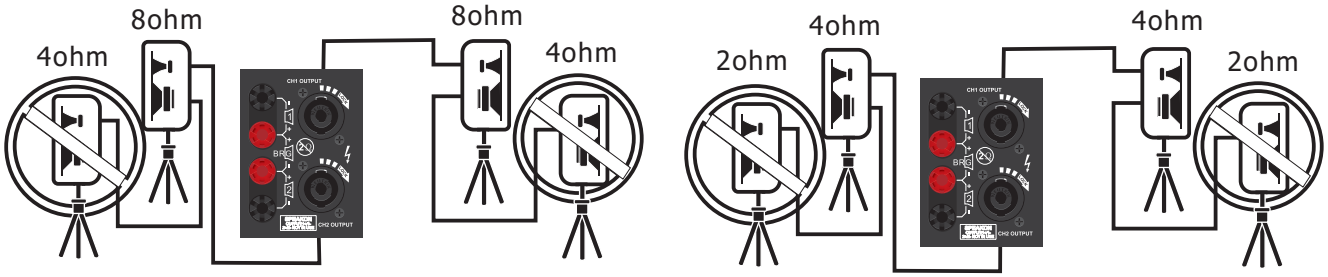
Each channel can match two 8ohms-speakers.





Each channel can match two 4ohms-speakers.

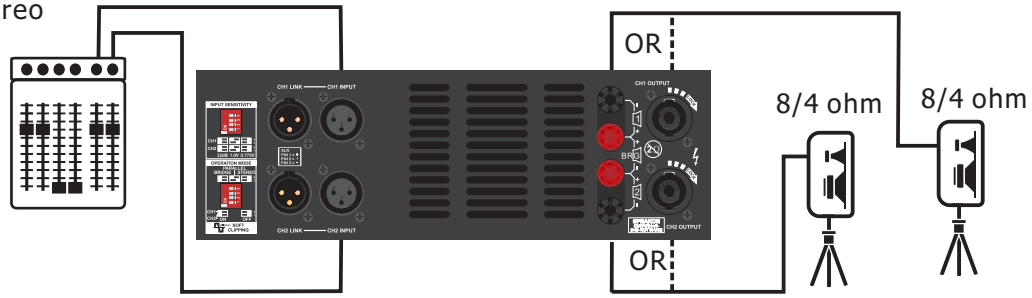




Stereo Mode
Mode switches turn to stereo

STEREO

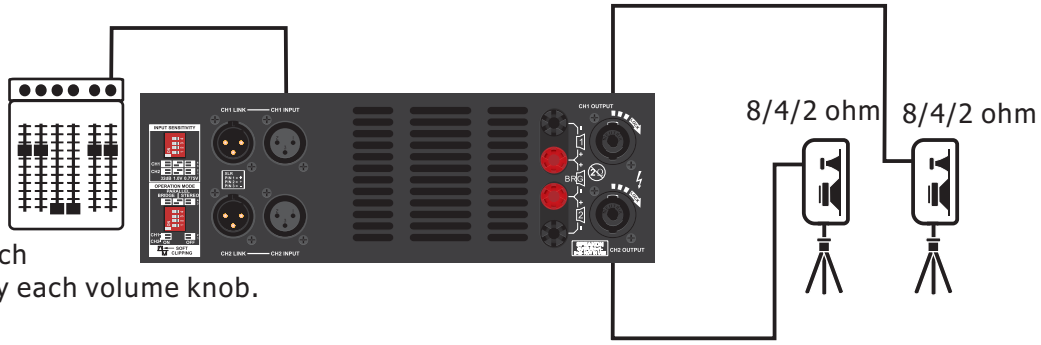
Input the signal to each channel, each output connects the speaker.



Parallel Mode
Mode Switch to Parallel

PARALLEL

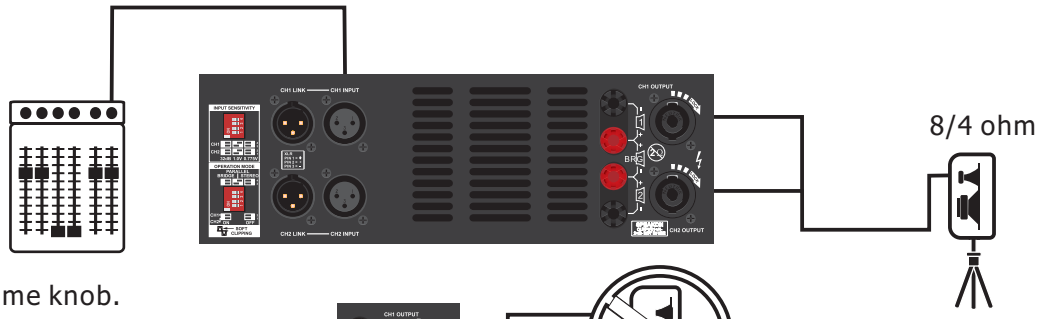
Each channel's output connects with speaker, the output volume of each channels is controlled by each volume knob.



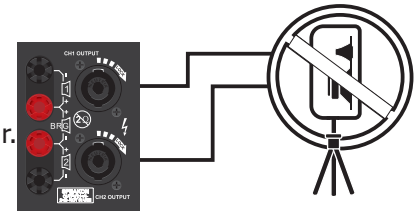
Bridge Mode
Mode switch to bridge

BRIDGE

Connect the "+" of each channel to the speaker. The output volume is controlled by the Ch1 volume knob.

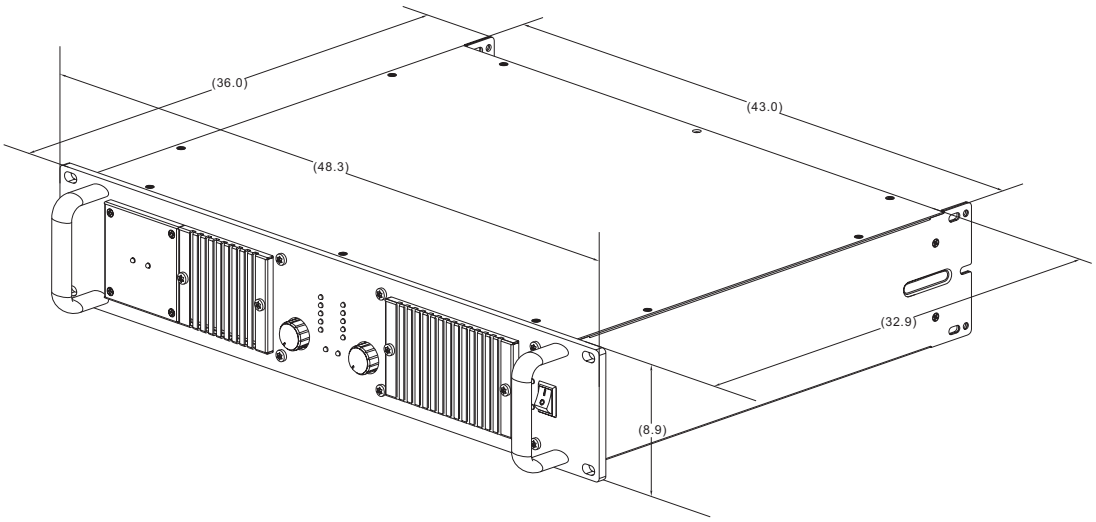


Don't connect two output with one speaker.

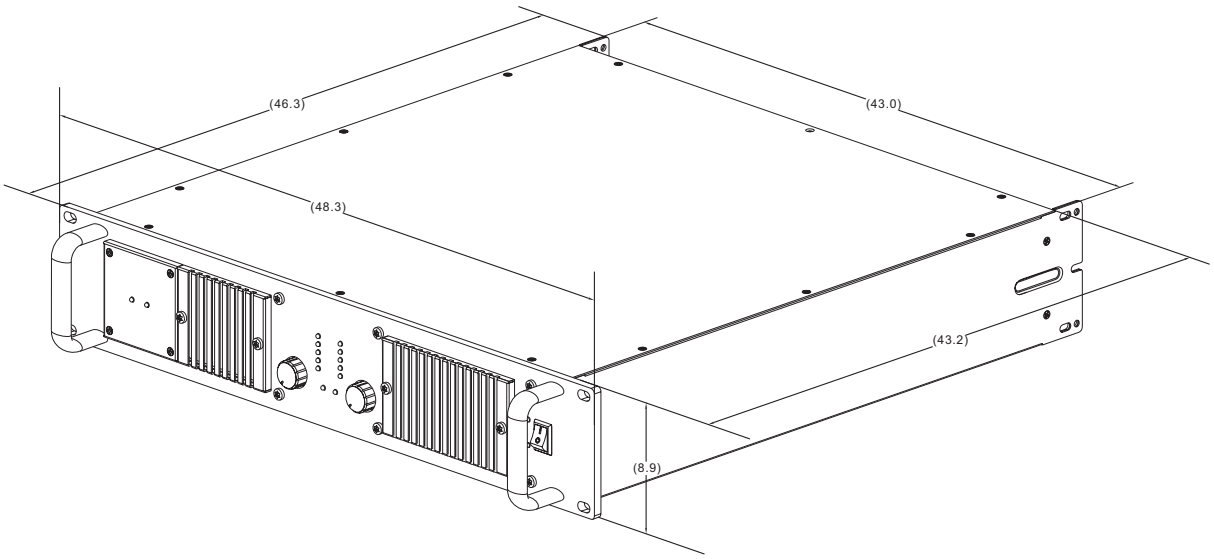


Product Dimensions：(CM)

MA1200sx/MA2400sx/MA3600sx



MA4800sx/MA7200sx



Specifications(110V/120V)

Model	MA1200sx	MA2400sx	MA3600sx	MA4800sx	MA7200sx
Output Power					
8 Ω Stereo*	280Wx2	400Wx2	600Wx2	800Wx2	1100Wx2
4 Ω Stereo*	450Wx2	650Wx2	950Wx2	1300Wx2	1700Wx2
2 Ω Stereo**	600Wx2	800Wx2	1200Wx2	2200Wx2	2800Wx2
8Ω Bridge*	900W	1300W	1800W	2600W	3500W
4Ω Bridge**	1200W	1650W	2500W	4400W	5100W
Other Specification					
Frequency response	20Hz-20KHz@8Ω,(+/-0.5dB)				
THD + N	<0.1%				
S/N Rate	⩾90dB				
Damping factor	>200				
Slew rate	>20V/us				
Input sensitivity	32dB/1.0V/0.775V				
Input impedance(bal/unbal)	10KΩ/20KΩ				
Voltage Gain（8 ohm）	36dB	37.5dB	39.3dB	40.6dB	41.9dB
Output circuitry	Class AB	Class 2H	Class 2H	Class 3H	Class 3H
Cooling	Air flow from front to rear				
Protection Function	Soft start, short circuit and over-load, direct current, over heat, distortion protection; volume gain, voltage lack, VHF protection				
Connector					
Input	XLR				
Output	SPEAKON, Binding post.				
Function					
Indicator	Sig, Clip, Pro,BRG,PAR, POWER, PEQ				
Front Panel	Power, Volume, PEQ				
Rear Panel	Stereo, Parallel, Bridge, Input Sensitivity, Flexible reduction peak				
Dimension/Wieght					
Product Dimension(MM)	398x483x89			501x483x89	
Packaging Dimensions (MM)	595x510x170			620x585x170	
Weight	9.3kg	11.7kg	11.9kg	15.1kg	15.6kg
Power	Non-plug Power Cable AC110V/50-60Hz. 10% AC120V/50-60Hz. 10%				

Remarks:
1. *,the power is tested under EIA standard.
2. **, the power is tested under the condition of 40ms burst, 1KHz sine wave and 1% THD.
3. Other data is tested under Q/SAE1-2005 standard.
4. SAE reserves the right to make changes in specification without prior notice.
The final specification is subjected to the user manuals.

Specifications(220V)

Model	MA1200sx	MA2400sx	MA3600sx	MA4800sx	MA7200sx
Output Power					
8 Ω Stereo*	310Wx2	450Wx2	650Wx2	850Wx2	1200Wx2
4 Ω Stereo*	500Wx2	750Wx2	1050Wx2	1400Wx2	2000Wx2
2 Ω Stereo**	600Wx2	1100Wx2	1350Wx2	2300Wx2	3000Wx2
8 Ω Bridge*	1000W	1600W	2200W	3000W	4100W
4 Ω Bridge**	1350W	2450W	2900W	4600W	6200W
Other Specification					
Frequency response	20Hz-20KHz@8 Ω ,(+/-0.5dB)				
THD + N	<0.1%				
S/N Rate	⩾90dB				
Damping factor	>200				
Slew rate	>20V/us				
Input sensitivity	32dB/1.0V/0.775V				
Input impedance(bal/unbal)	10K Ω /20K Ω				
Voltage Gain（8 ohm）	36dB	37.5dB	39.3dB	40.6dB	41.9dB
Output circuitry	Class AB	Class 2H	Class 2H	Class 3H	Class 3H
Cooling	Air flow from front to rear				
Protection Function	Soft start, short circuit and over-load, direct current, over heat, distortion protection; volume gain, voltage lack, VHF protection				
Connector					
Input	XLR				
Output	SPEAKON, Binding post.				
Function					
Indicator	Sig, Clip, Pro, BRG, PAR, POWER, PEQ				
Front Panel	Power, Volume, PEQ				
Rear Panel	Stereo, Parallel, Bridge, Input Sensitivity, Flexible reduction peak				
Dimension/Wieght					
Product Dimension(MM)	398x483x89			501x483x89	
Packaging Dimensions (MM)	595x510x170			620x585x170	
Weight	9.3kg	11.7kg	11.9kg	15.1kg	15.6kg
Power	Non-plug Power Cable AC220V/50-60Hz. 10%				

Remarks:
1. *,the power is tested under EIA standard.
2. **, the power is tested under the condition of 40ms burst, 1KHz sine wave and 1% THD.
3. Other data is tested under Q/SAE1-2005 standard.
4. SAE reserves the right to make changes in specification without prior notice.
The final specification is subjected to the user manuals.

Specifications(240V)

Model	MA1200sx	MA2400sx	MA3600sx	MA4800sx	MA7200sx
Output Power					
8 Ω Stereo*	300Wx2	450Wx2	650Wx2	850Wx2	1200Wx2
4 Ω Stereo*	500Wx2	750Wx2	1100Wx2	1400Wx2	2000Wx2
2 Ω Stereo**	600Wx2	1150Wx2	1400Wx2	2300Wx2	3000Wx2
8 Ω Bridge*	1000W	1600W	2280W	3000W	4100W
4 Ω Bridge**	1350W	2550W	3200W	4600W	6500W
Other Specification					
Frequency response	20Hz-20KHz@8 Ω ,(+/-0.5dB)				
THD + N	<0.1%				
S/N Rate	⩾90dB				
Damping factor	>200				
Slew rate	>20V/us				
Input sensitivity	32dB/1.0V/0.775V				
Input impedance(bal/unbal)	10K Ω /20K Ω				
Voltage Gain（8 ohm）	36dB	37.5dB	39.3dB	40.6dB	41.9dB
Output circuitry	Class AB	Class 2H	Class 2H	Class 3H	Class 3H
Cooling	Air flow from front to rear				
Protection Function	Soft start, short circuit and over-load, direct current, over heat, distortion protection; volume gain, voltage lack, VHF protection				
Connector					
Input	XLR				
Output	SPEAKON, Binding post.				
Function					
Indicator	Sig, Clip, Pro, BRG, PAR, POWER, PEQ				
Front Panel	Power, Volume, PEQ				
Rear Panel	Stereo, Parallel, Bridge, Input Sensitivity, Flexible reduction peak				
Dimension/Wieght					
Product Dimension(MM)	398x483x89			501x483x89	
Packaging Dimensions (MM)	595x510x170			620x585x170	
Weight	9.3kg	11.7kg	11.9kg	15.1kg	15.6kg
Power	Non-plug Power Cable AC220V/50-60Hz. 10%				

Remarks:
1. *,the power is tested under EIA standard.
2. **, the power is tested under the condition of 40ms burst, 1KHz sine wave and 1% THD.
3. Other data is tested under Q/SAE1-2005 standard.
4. SAE reserves the right to make changes in specification without prior notice.
The final specification is subjected to the user manuals.

No response
Make sure that the wires connect well with the power socket, and the power socket can work well.
You can use other apparatus to check the AC power, for example, a lamp. Check if the circuit breaker is open, if so, reset the button. If the circuit is open again, the power amp needs maintenance.

Power Amp. Aphonia
If the power amp works over-load, the fan will work at full speed, and the temperature is getting high. Please cut down the output power and volume in case of the device aphonia. Reduce the input signal, the power amp. will work normally after 1-2 minutes. If the power amp.'s temperature is too high, and the fan doesn't work, you're requested to maintain it with the help of professionals.

Ch2 NOT working.
Check mode switch on the rear panel to make sure it is STEREO mode. When in PARALLEL or BRIDGE mode, the Ch2 will not work.

Input sensitivity of two channels' not the same
Make sure the sensitivity sets of Ch1 and Ch2 are the same.
Make sure the sets of volume control are same.(turn the volume knob to 0dB when use the power amp.)
Make sure the output speakers' impedances are same.

Distortion
If the red "CLIP" illuminates, the output power is over the rated power. Limit circuit will reduce volume in case of serious over-load. If keeping increasing the input volume, the limiter may cannot work and the distortion will be more severe.

If the power cable of speaker is too short or malfunction, the distortion or device aphonia may happen and the red CLIP will illuminate frequently. Please check the power amp. through connecting the other speakers and cables.

If the matched impedance of each channel is less than 2ohm, too many speakers will make the power amp work over load easily, and the temperature will get higher.

Distortion or not clear
The red CLIP doesn't illuminate, so the power amp. doesn't happen distortion. The speaker maybe malfunction, or the input signal has distortion.
1. Use other devices to check the speaker.
2. If the setting of the gain control of the power amp. is too small, it may happen the over-load of input. Please turn down the input volume until the distortion disappears and increase the gain of power amp until the sound is good enough. Usually the knob will be at 0dB or close to 0dB.
3. Check all the connection of inputs. Do not input two different signals to a channel. The mixer is advised to be used.

NO SOUND
Make sure the gain control works.
Make sure the input cables connect well.
Make sure the signal is good.

No sound but the SIG illuminates, there is signal outputs from the power amp., when the speaker is connected, you can hear the sound. If not, check the connection of speaker or try with another speaker.

No sound, PRT(protection) and(or) EMP(over-hear) LED illuminate(s), mute the power amp. when turn on and down it in case of the shock sound. If the temperature is too high, mute the power amp. until it cool. If the fan doesn't work now, the power amp. needs maintenance.

Drone
Balance XLR cable is better for long distance. If adopt un-balance connection(single wire), the drone may happen, and the interference will usually be introduced.

According the different type of connection, the drone may occur earlier.

Last, some drone can reduce via turn down the gain of power amp., and increase the signal gain.

The amplifier is required maintenance in the condition below:
1. If the amplifier smokes or smells burning.
2. If the cabinet has severe indentation and deformation
3. If the amplifier are dipped into the water
4. If the internal components loosen
5. If AC breaker skips out when current increases.

Disclaimer

Sae Audio Co., Ltd. is not responsible for any damage of power amplifiers or other equipments caused by negligence or improper installation.

Manufacturer Sae Audio Co., Ltd. offer 1 year limited quality warranty.

Manufacturer Sae Audio Co., Ltd. guarantee the device will not happen material or manufacturing process defect during warranty period. If damages happen in the condition of normal installation and use, manufacturer Sae Audio Co., Ltd. will change faulty parts and repair damaged product according to this quality agreement free-of-charge. But customer must return the product to our factory or one of the authorized maintenance points. Meanwhile, customer must pay for the freight charges in advance and enclose purchase certificate (warranty card client joint and receipt or invoice copy) at the same time.
This quality agreement provides the returned product must have to be checked by us to judge the defect is existing or not. This agreement is not suitable for any misuse, carelessness, accident, wrong installation, or date code and series number are not cleaned or damages too terrible to recognize.

Manufacturer Sae Audio Co., Ltd. will not take responsibility for accident or indirect damage.
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Postal Address:
Sae Audio Co., Ltd. After-sale service department
NO. 39 WenJiao Road East, HeShun, NanHai, FoShan, GD, China

Postcode:
528244

Tel:
0757-8560-8331

Fax:
0757-8568-8191

E-mail:
support@saechina.com

Brand Website:
www.famousound.com

Manufacturer Website:
www.saeaudio.com

www.famousound.com

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